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OF THE

COMMITTEE ON ARMED SERVICES

UNITED STATES SENATE

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82d Congress

INTERIM REPORT ON DEFENSE MOBILIZATION
AIRCRAFT PROCUREMENT

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LETTER OF SUBMITTAL

UNITED STATES SENATE,
COMMITTEE ON ARMED SERVICES,
August 28, 1952.

MY DEAR MR. CHAIRMAN: There is submitted herewith a report of the Preparedness Investigating Subcommittee which was appointed by you under the authority of Senate Resolution 263 of the Eighty-second Congress. This report deals with the status of aircraft procurement under the defense mobilization program.

We intend to keep a continuing check upon the status of defense mobilization and will submit further reports as our studies progress.

Respectfully,

LYNDON B. JOHNSON,
Chairman, Preparedness Investigating Subcommittee.

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AIRCRAFT PROCUREMENT

I. Introduction

As a committee charged with the responsibility of investigating the preparedness program, we have long been aware of the many inadequacies in America's defensive position.

These inadequacies are born of many factors. They can be traced to the too hasty demobilization that followed World War II; the relative tardiness with which many of our leaders recognized the aggressive intentions of the Soviet Union; the national distaste for armaments in a period that can technically be termed peace.

But whatever the reasons, weaknesses undoubtedly exist. They are present—as a potential column of enemy strength—in the air, on the ground, and in the seas. Of the three, perhaps the most disturbing is our weakness in the air.

THE CRADLE OF AIR POWER

It is difficult to think of America's military air position in terms of weakness. This is the cradle of air power. But seven short years ago, our fighting planes roamed the skies of Europe unchallenged. Our Flying Fortresses and our Liberators bombed the industrial citadels of Germany at will. Our Superforts—the B–29's of the Twentieth Air Force—pounded Japan to her knees.

Never before had any nation commanded such colossal powers of destruction. Never before had history recorded such tremendous concentrations of fire power. These colossal powers of destruction, these tremendous concentrations of fire power, were due largely to one factor—American control of the air.

An Olympian observer, viewing America's aerial assault from a detatched position—might well have concluded that such power could never diminish. He might well have decided that this Nation would always possess mighty air armadas capable of bringing any contest to a quick and final settlement.

WE ARE BEHIND

And yet, less than a decade later, America has lost the right to claim unquestioned mastery of the air. America is behind in the weapon in which we should have unchallenged supremacy.

Many reasons, many justifications, have been advanced for the loss of this mastery. But whatever the reasons or whatever the justifications, the loss remains a fact. It cannot be denied.

The Senate Preparedness Investigating Committee has long been interested in air power. We have conducted intensive investigations, held long hearings, made careful studies. We have issued two reports covering the subject and have carefully studied the reports available from other organizations.

In our first report on air power, issued November 29, 1951, we disclosed that actual aircraft production was slipping alarmingly behind schedules. In our second report on the subject, issued June 17, 1952, we contrasted the adequacy of our plans with the extent of our needs and found that our plans were inadequate.

OUR PURPOSE

In this report we propose to set forth the facts and the events that have led to our decline. We propose to outline, insofar as it is consistent with security, the planning, the decisions, the orders and the determinations that have brought us to our present state.

We are fully aware of the difficulties of such a study. We approach the subject with all due humility. But we feel that the facts, which we have gleaned from a study extending back to 1951, should be presented to Congress and the public.

It is our hope that by so doing we will be able to clarify some of the confusion that has surrounded this matter. We feel that the claims and the counterclaims that have flown through the air have engendered considerable heat but shed little light. They have created considerable wind power but insufficient air power.

OUR APPROACH

We are approaching this subject solely from the standpoint of our air preparedness. Our primary interest lies in the ultimate production of those aircraft which are deemed necessary to our national security. Our basic task has been the examination of the planning, procurement, and production programs of the Department of Defense.

Of necessity, we will touch upon other agencies during the course of this report. But we wish to make it clear that we do so only to the extent that they impinge upon the functions of the Defense Department itself. We do not conceive it to be within our general jurisdiction to investigate the civilian production agencies of the Government and we have no intention of invading the jurisdiction of others.

Essentially, we are exploring three questions:

1. Why was our air power permitted to decline?
2. Why have we been rebuilding so slowly to a position of strength?
3. What can be done to speed that rebuilding?

With this explanatory preface, we hereby proceed to an examination of the facts behind the current state of our air defenses.

II. Early Warnings

It cannot be said that American air power ebbed and was held at low levels simply for lack of warning. There were warnings and they came from some of America's most prominent citizens. Let us consider, for example, the expression of Dr. Vannevar Bush, one of our most noted scientists, in the summer of 1949—a year prior to Korea.

Discussing the prospect of war, in his book Modern Arms and Free Men, he stated:

> It need not come if we fully maintain our strength. It need not come if we realistically enough and with enough determination resolve that it shall not. It

need not come at all, for if the strength of free peoples prevents it for a generation, that same strength can then produce a new sort of world in which great wars will no longer occur. For this consummation we face a task that will test us as we have never been tested before, that will test whether we really mean it when we say that we believe in human dignity and human freedom, whether we can really submerge selfishness and petty motive, and bring our enormous latent power to bear, to make our way of life function with true effectiveness for the good of all.

And further:

* * * for one thing is certain: If another great war is started by a dictator, it will be opened by a smashing, great surprise offensive calculated to paralyze us before we are aroused.

We (the United States) could not open a war in this manner, but our potential enemies could. We could not, for the ponderous machinery of democracy does not work in that manner. Congress alone can declare war, though the President has the power to repel attacks. Even so, we still could not undertake a successful surprise attack, even if convinced that war was inevitable and imminent. We live in a goldfish bowl in this country. All our moods and passions are open for the world to see. A great democracy cannot be ordered into war; it cannot be taken into war by its elected representatives until the people at large are convinced that we must fight, that there is no other way out.

In a dictatorship it is different. Those who study war have realized this fact since Pearl Harbor, if they did not know it before. But a dictator, if his control were tight enough and his iron curtain utterly impenetrable, might stage a large surprise opening when he decided to go to war.

It alters the margin we must keep in the race of preparedness. Hence in the race, not a race in armaments alone, but a race in national strength from every aspect that contributes to the waging of war, we must seek a substantial balance in favor of us and our potential allies. [Emphasis supplied.]

Dr. Bush succinctly stated not only the ends that should be attained in the course of our mobilization effort, but the great problem accompanying a cold war call-to-arms. This thinking is important as a preface to a discussion of our air power, the need for the build-up and the necessity to overcome the obstacles and deterrents which have handicapped its fulfillment.

But even before Dr. Bush's statement, the facts of air power had been set forth by two official bodies—first by the President's Air Policy Commission and then by the Joint Congressional Aviation Policy Board.

On December 30, 1947, the President's Air Policy Commission reported:

The conclusions of the Commission thus fix the target date by which we should have an air arm in being capable of dealing with a possible atomic attack on this country at January 1, 1953.

The force we need by the end of 1952 must possess the complicated defensive equipment of modern electronics and modern defensive fighter planes and ground defensive weapons.

We also must have in being and ready for immediate action a counter-offensive force built around a fleet of bombers, accompanying planes, and long-range missiles which will serve notice on any nation which may think of attacking us that if it does, it will see its factories and cities destroyed and its war machine crushed.

Such a force does not grow overnight. It takes 4 to 7 years to develop a new plane from the engineering board to production.

We have concluded that the minimum force necessary *at the present time* is an Air Force composed of 12,400 modern planes, organized into 70 combat groups, and 22 special squadrons, supplemented by 27 National Guard groups and 34 groups of Air Reserve. All these forces, with the exception of the Air Reserve, must be equipped, trained and ready for immediate action in the event of war. We should build to this force *as rapidly as possible and once it is achieved, never permit it to drop below this level.* Nor should we permit it to become impotent and ineffective because of failure to keep it modernized with the very best planes and equipment available.

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On March 1, 1948, the Joint Congressional Aviation Policy Board confirmed generally the conclusions of the Commission and warned in the most specific language of the "whys" for air strength:

> World War III, if it comes, will be in sudden and indiscriminate attack on our cities, our factories, our transportation lines, our communication centers and water supply, and more important than all else, upon our lives. It will be more extensive than the attack on Hiroshima. There will be no time, as in World War I and World War II, for mobilization. The only "defense" will be swift and devastating retaliation attack.
>
> Until men of all nations can meet in good will in the council chambers of the world, anything less than this complete supremacy in air power is self-deception.

It is a tragic historical fact that it took Korea and, even after that aggression, the entry of Communist China into the struggle, to convince almost every echelon of government of the necessity to make effective these earlier proposals for air superiority.

III. The Theory of Post-Korean Mobilization and Its Shortcomings

Prior to the request for supplemental military appropriations which followed these decisions to engage upon a state of partial mobilization, the air defenses of the United States were in an unbelievable state. General Spaatz advised the committee that at the end of 1946 the United States Air Force had two operationally effective groups of the 55 then in existence. Similarly, naval air power had slipped to an incredibly low level. As the chairman of the committee noted:

> * * * if we did any job better than mobilization it was the demobilization following VJ-day.

From 1946, through the appropriations for the fiscal year ending June 30, 1950, $90 billion were available to the Military Establishment. However, of this sum about $42 billion was spent in fiscal year 1946 very largely for liquidation of World War II costs. Despite the pronouncements of the two Commissions as to the need for implemented air power, only $2.3 billion of the afore-mentioned moneys, or 18 percent of the total appropriated, were available annually for procurement of all major weapons including aircraft. During the fiscal years 1947 through 1950, the dollars spent for aircraft procurement averaged less than $900 million per year.

With the invasion of Korea and the subsequent entry of Communist China into the conflict we were faced with the necessity for making a quick and vital decision on the nature of our mobilization. We have been told that the following constitutes generally the manner in which it was decided to accomplish that mobilization:

> It was realized that if we went at once into all-out mobilization and shifted all of our available resources of men, machines, and materials into the production of war goods, we could thereby achieve a maximum of war production at the earliest feasible date. If all-out war was, in fact, imminent, that was undoubtedly the course to pursue.
>
> It was also realized that if all-out war did not occur relatively quickly; if, in fact, we were faced with a long trial of endurance, immediate all-out mobilization would have been the wrong course to pursue. It would have meant the piling up of mountains of munitions, rapidly growing obsolete. It would have meant the conversion of most of industry to our work and geared to a production pace that could not possibly be maintained for an indefinite number of years without national bankruptcy.
>
> The decision was thereupon reached that our Nation should embark upon a program of partial mobilization; that sufficient of our resources of men, machines, and

materials should be devoted to war goods to enable our country to attain at least a minimum of strength as soon as feasible; that during the build-up of munitions output could be rapidly expanded in event of need; and that simultaneously there should be a broad expansion of basic resources—steel, aluminum, and power, among others.

This decision involved the taking of a serious calculated risk * * *

This, then, was the broad pattern allegedly set for our future defense production operation. It is important to remember that this decision was made in December of 1950. It is important to note this because we shall set out later in the report that the so-called stretch-out involves a postponement not only of the date on which peak production of aircraft will be obtained, but a further setting back of time during which the industrial base will be broadened for use in the event of an immediate war emergency.

Aircraft procurement is time-consuming. The development of modern air fleets is not accomplished by miracles. Such development cannot overcome the immutable fact of lead time—the time interval which must elapse between the date on which a contract for planes is let and the date on which the first airplane is delivered under the contract. Every minute, then, from the development of the cold-war partial mobilization concept was precious. Time wasted, bad planning, slippages could only delay the day of attainment of required needs when we were operating under a theory with such a minimum tolerance.

As will be demonstrated, the history of our air build-up is a saga of bad programing, neglected warnings, lack of coordination, abuse, misuse, and disuse of power, bad advices to the Executive, and a general refusal on the part of our governmental agencies to pull together or work together in a dedicated way to strengthen our air arsenal.

IV. Our Minimum Requirements for Air Power

A. THE NECESSARY FORCE LEVELS ESTABLISHED BY THE JOINT CHIEFS OF STAFF

The responsibility of the Joint Chiefs of Staff is quite specific. As General Bradley stated to the committee:

Based upon national objectives and basic military tasks received from the National Security Council, which of course are developed on the basis of the national intelligence estimate, the Joint Chiefs of Staff issue joint outline war plans to the services for use as strategic guidance in their planning. These outline plans give broad tasks or missions, phasing of future operations, and the composition and phased deployment of major combatant forces.

Based on Joint Chiefs of Staff strategic guidance, each service prepares its own mobilization plan. In their mobilization plans the services develop program for the required major combatant and necessary supporting forces properly time-phased to meet the requirements of the basic joint plans.

From the forces thus developed time-phased military requirements are determined.

The requirements derived from the initial or revised plans, as the case may be, are the military requirements of the Department of Defense.

In addition to these determinations, it is the responsibility of the Joint Chiefs to indicate the time factors involved in any program of build-up. In this respect the committee was quite specifically advised by the Chairman of the Joint Chiefs of Staff that—

The Korean incident was considered as a sign of the worsening of the world situation. Based on the entire world situation, the Joint Chiefs of Staff recommended that the following Air Force and Naval Aviation force levels be provided in being not later than December 31, 1954:

(1) Air Force: 126 modern combat wings, 17 heavy and medium troop-carrier groups, and supporting units.

(2) Navy: 16 carrier air groups; 19 antisubmarine warfare squadrons, including 4 helicopter squadrons; 34 heavier-than-air plus 4 lighter-than-air patrol squadrons; and 3 Marine Air Wings.

That decision was made even before the manifestation of strength by Chinese Communist Air Force and did not take into consideration the additional demands upon our forces brought about by the Chinese intervention.

As Secretary of Air Finletter stated:

I must emphasize that the 126 combat wing force is one which is calculated only with respect to the 3 main jobs—the strategic job, the air defense job, the tactical job; that the tactical job is one for which the planning is made almost entirely with respect to NATO; and that none of the planning provides forces sufficient to carry on local wars. The 126 combat wing force is one which is planned for the purpose of preventing a major war by being in readiness at all times—for the purpose of deterring aggression by possible enemies and to prevent disaster if war should come.

To the extent that this force has been diverted to the Korean conflict—and the extent is considerable—there is still a danger of a numerical shortage in the Air Force at the present time.

The Joint Chiefs have not retreated from the strategic needs outlined above. In fact, as recently as May 23 of this year, General Bradley commented:

With reference to the reduction in the proposed military budget for fiscal year 1953, the Joint Chiefs of Staff desire to reaffirm that they consider the general period of 1954 to be the most dangerous for the security of the United States in the foreseeable future. Adoption of the reduced program postpones until 1956 our military capability to meet this threat.

V. The State of Our Existing Air Power

A. OUR AIR POWER BEFORE KOREA

For a better understanding of the events that led to the present, the committee sought guidance from the retired Air Force generals who had participated in building the greatest air force in the world from 1941 to 1945 and who then presided at its liquidation. Gen. Carl Spaatz, the victor of the air battles of Germany, revealed to the committee for the first time the contents of a memorandum which he submitted to Gen. H. H. Arnold on October 11, 1945.

With the rapid weakening of our forces in Europe and Asia, the U. S. S. R. is able to project moves on the continent of Europe and Asia which will be just as hard for us to accept and just as much an incentive to war as were those occasioned by the German policies.

I agree that there is very little likelihood of Russia's being able to deliver an attack against the United States in the very near future. However, the next war will not necessarily be started by attacks against the United States proper. * * *

Until the interior of Russia is open to us with the same freedom with which the United States has been open to them, I believe we should proceed rather slowly toward demobilizing our Armed Forces, particularly units of our Strategic Air Forces.

This unqualified warning of the prospective need for greater air strength went unheeded. General Spaatz had this to say of the deterioration of our air power quality and quantity:

> On VJ-day our Air Force consisted of 200 operationally effective groups, and I might add it was probably the most powerful military force in the world at that time.
>
> In succeeding months rapid demobilization reduced this force to 109 groups by January 1, 1946, and to 71 groups by April 1946. In each case most of the groups were far below wartime effectiveness standards. By the end of 1946, 55 groups remained, and inspections indicated that only 2 of these were operationally effective. You can see why Mr. Stalin felt pretty free to move around that time.

Gen. Ennis C. Whitehead, former commanding general of the Air Defense Command, in describing the state of our air defense during August 1951 stated:

> I think that a well-planned, well-executed surprise air attack on the United States would have succeeded beyond the fondest hopes of its commander.

He elaborated by noting that at that time at least 75 percent of an enemy attack strike force could have successfully pierced our defenses in good weather. And at night or under instrument flight conditions, our air defense installations and equipment could have done no better than to destroy 1 to 5 percent of the attacking hostile force.

As early as August of 1951, General Whitehead urged an air build-up along the following lines:

> The No. 1 priority of an air force, the thing to do first in my judgment, is 6 to 10 wings of heavy bombers, 25 to 30 wings of medium bombers, 8 wings of medium and heavy reconnaissance, 5 to 8 wings of escort fighters, which would mean a strategic air command of somewhere in the bracket of 44 to 56 groups, supported, of course, by adequate transoceanic air transport to move them into their deployment positions for war.
>
> The strike force and the air defense force, therefore, would require just that combined mission, in my judgment 75 to 85 or 86 wings.

B. OUR EXISTING INVENTORY

(a) The Air Force in being

As of March 31, 1952, although our percentage of jet aircraft had increased we had fewer planes in the Air Force than at the start of the Korean war. Of those planes, a greater proportion of them was second line than before Korea.

In other words, despite all our efforts, there has been a net loss in total inventory from July 1, 1950, to March 31, 1952.

The total inventory requirement for 126 modern combat wings as of April 1, 1952, was three times the number of modern aircraft available. Or, to put it differently, available first-line inventory constituted less than one-third of our total needs for 126 modern combat wings.

As a matter of fact, at the end of fiscal year 1952 we had only one-half of the combat wings with modern equipment which were deemed necessary.

According to Air Force testimony, as of April 1, 1952, slippage in production amounted to approximately 10 percent of the existing schedule. The Director of Procurement and Production Engineering for the Air Force stated that—

> slippage is occurring today; it has occurred in the past; and it will probably occur to some extent for 6 to 8 months forward.

(*b*) *Navy aircraft in being*

Our Naval Air Force picture is no better. As of March 31, 1952, the Navy had less planes that it had at the start of the Korean war. Moreover, the preponderance of second-line planes to total inventory was greater as of the latter date than before Korea. In addition, the ratio of jet to piston engines was absurdly low as compared with the required ratio of jets for attainment by 1955. At present we have far less than the first-line aircraft we need.

This dismal picture was painted even blacker by the Deputy Chief of Naval Operations for Air when he pointed out that production slippages were continuing, and that schedules had not been met in the past, and were still not being met.

C. OUR PROPOSED EXPANSION OF AIR POWER AND MOBILIZATION—ITS DEVELOPMENT

In considering our proposed Air Force build-up, we must keep in mind that, as Secretary Finletter stated, "it would be highly desirable to have 126 combat wings in force in being today." However, financially and productively, this was and is impossible. Accordingly, it is necessary to describe the program for further mobilization in the light of our defense needs and our capacity to meet those needs.

It is important to consider Mr. Finletter's testimony before the committee in outlining the background of the Air Force build-up:

> The Air Force at the time the Korean war started had an authorized 48 wings, of which 42 were combat wings.
>
> In October 1950, Congress appropriated funds to increase the Air Force to 68 wings. In January 1951, Congress appropriated money to increase the Air Force to 84 wings. In May 1951, Congress appropriated money to build the Air Force to 95 wings.
>
> The regular 1952 budget, as submitted to the House of Representatives, was to carry out the 95-wing program. After the time that the appropriation bill passed the House and while it was before the Senate Committee on Appropriations, the Joint Chiefs of Staff and the civilian Secretaries approved and the President accepted a proposal to build the Air Force to 143 wings (of which 126 were to be combat wings).
>
> While the appropriation bill was before the Senate Appropriations Committee there was introduced in the Senate the so-called national emergency fund provision calling for the appropriation of $5 billion for the increase in the air power of the Nation, Air Force and Navy. This proposed legislation failed and $1 billion was appropriated, of which the Air Force got two-thirds. This $667 million enabled the Air Force to start on the long lead items of the 143 wing force, but the failure to get the $5 billion was the first blow toward our getting the modernized 126 combat wing force by the time we should have it, namely, by the end of fiscal 1954.
>
> The situation as we started on our fiscal year 1953 budget preparation was that the build-up of the Air Force from 95 wings to 143 wings, of which 126 were to be combat wings, had been authorized by the Joint Chiefs of Staff, the civilian Secretaries of the Department of Defense, and by the President. We accordingly started our calculations as to how much we needed to get this force and to get it as close to the end of fiscal 1954 as possible.

Even the original basic planning to attain 143 wings by 1954 carried with it an enormous amount of risk. In paring the $26.7 billion budget originally submitted to the Secretary of the Air Force to the $22.8 billion ultimately submitted to the Secretary of Defense, several important decisions were made which involved important elements of military risk.

No provision was made for a reserve to provide for combat attrition. The Military Air Transport Service was substantially reduced.

The risk was further intensified by the next cut from $22.8 billion to $21.4 billion made by the Secretary of Defense in submitting his budget to the President. However, it was the testimony of all of the hierarchy in the Department of Defense that, with the above reservations, a $21.4 billion budget could still have provided 124 combat wings by June of 1954 with the remaining 2 wings necessary to complete the complement to be added by December 1954.

However, according to the testimony given to this committee the administration decided to slice $3 billion from the $55 billion requested, which resulted in a reduction of the Air Force appropriation from $21.4 billion to $20.7 billion. In addition to the cut in new obligational authority, the administration further imposed limitation on the expenditures which might be made by the Air Force in fiscal year 1953. The combined effect of these actions resulted in what is commonly termed the "stretch-out."

In commenting upon this decision, the Secretary of the Air Force warned:

> The extension of the date of readiness to the end of fiscal year 1955 (occasioned by the stretch-out) contained a very substantial element of military risk; obviously, to go beyond it must compound the risk and make it entirely unacceptable.

Although the foregoing testimony and analysis relates entirely to the funding of Air Force expansion, a similar situation obtains with respect to funding of Naval Aviation expansion.

In his testimony before the committee, General Bradley stated:

> In general, the effect of the stretch-out on security will be to postpone until 1956 the full realization of United States military capabilities originally planned for achievement in 1954. Thus, the stretch-out program will seriously reduce the anticipated military capabilities of the United States and the North Atlantic Treaty Organization to withstand successfully any all-out attack on the part of Russia prior to 1956.

The fiscal year 1953 appropriation bill that was finally enacted by Congress and approved by the President on July 10, 1952, appropriated to the Air Force sufficient funds to substantially reach its 143-wing goal by approximately the middle of 1955.

VI. The Failure To Meet Production Schedules

No reason acceptable to the committee has been advanced for the failure of the combined brainpower of the military and civilian authorities to establish realistic production targets. In our opinion, no business organization would countenance the excuses and self-serving justifications for either the unrealism of the schedules established or the inability to meet even the reduced schedules.

Despite attempted legerdemain with charts and graphs, nothing can obscure the fact that our planners have failed miserably. They have continuously erred in setting production goals. They have yet to acknowledge that, given the necessary determination, our productive resources could produce in line with our needs.

To understand what has happened, it is necessary to set out quite specifically the number of aircraft planned, on a production basis, under each of the approved schedules of the Air Force and Navy.

To meet Joint Chiefs of Staff minimum force level requirements there have been established since Korea three distinct production targets: the A–14 of June 1951, the A–15 of November 1951, and the stretched-out A–16 of January 1952. For the Air Force, the A–14 contemplated a 95-wing Air Force with 70 modern groups predicated upon a peak monthly production of 1,050 aircraft. The A–15, which was never officially approved but which could well represent our actual needs, set its sights at 1,400 aircraft per month by December of 1953.

The A–16 schedule cut back monthly production of aircraft for the Air Force to a peak of 800 in December 1952 and stretched out the complete attainment of 126 modern combat wings until December of 1955.

Navy Aircraft production plans were similarly downgraded. Under A–14, 350 per month in December 1952; under A–15, 425 per month in September of 1953. A–16 reduced and set back monthly production figures to a peak of 354 in May of 1954.

This, then, constitutes a double stretch-out, for under the A–16 schedules, despite the greater over-all advertised size of our prospective air power, aircraft monthly production goals are lower and are attained at substantially later dates.

To make matters worse, as of May 31, 1952, total production was still below the new and modest A–16 schedule and is in fact short of the target established under the A–14 schedule which contemplated a 95- rather than a 143-wing Air Force. In terms of percentages, the Air Force and the Navy have received approximately 20 percent fewer aircraft from June 1951 through April 1952 than were originally scheduled.

Those defections cannot be blamed upon the aircraft-manufacturing industry. At this point, we will set forth the relationship of the industry to this failure of scheduled performance.

A. AIRFRAME AND ENGINE PRODUCTION CAPABILITIES

Almost without exception, the aircraft-manufacturing industry of the United States participated in the creation of production schedules. In fact, this participation extended even to the downgrading of the goals initially set by defense procurement officials. As early as 1950, H. M. Horner, president of the United Aircraft Corp., cautioned against overoptimism in setting future production goals.

> Fivefold increases in aircraft-engine production within a year simply is not in the deck. Given no delay in manpower, given access to all the necessary materials, and given all the machine tools we will need, the very best we can do in 1 year is a threefold increase in power-plant production. If we have absolutely no bottlenecks, we can reach a sevenfold production increase in 2 years from now. In the third year, after we have brought in the automotive manufacturers as licensees and established satellite plants and trained our working force, then we can produce whatever the economy can stand.
>
> But there's no miracle that can be substituted for time.

Despite this cautionary note, however, the majority of the aircraft industry still maintains that, if their prerequisites for accelerated production had been met, even the most optimistic production targets could have been hit.

In one respect there is a complete concurrence of opinion; a greater effort than the one presently under way can be accomplished. The aircraft industry felt it could provide the elements for 126 modern

combat wings and complete the necessary naval aircraft requirements close to the dates originally set if given the tools, the plant expansion, the materials, and the manpower.

Considering the problems of the industry, this would have been a large order. After Korea, it was told to tool up for a production infinitely in excess of its peacetime operations. This required a degree of expansion and a quality of know-how quite different from the one which accomplished World War II production. In the few years since the B–29 was the fashion plate of aeronautics, the whole philosophy of aerodynamics had shifted. The techniques of jet-engine manufacture had replaced piston-engine design and swept-back wings were being substituted for the old straight wings.

The industry was ill-prepared for such accelerated expansion and production. It has always suffered peaks and valleys and lower rates of return on invested capital than normally accrue to big business in our system of free enterprise—2 to 3 percent against the average of 5 to 6 percent. It depended too heavily on the business of one customer—the Government.

If the industry were to produce what was deemed necessary, it required understanding attention. Instead, it received bureaucratic inattention.

The industry stipulated its requirements. These were definite and firm contracts, necessary plant expansion, sufficient quantities of skilled manpower, first priority on strategic materials, available components, Government-furnished equipment, machine tools, participation in research and development, and continuity of operation. These were the production insistencies born of the experience of World War II.

Boeing, Convair, and North American, among the airframe manufacturers, and Wright, Allison, and United, among the engine producers, unqualifiably insist that, without exception, the urgency of July 1950 evaporated. Procurement procedures slowed up contract letting. Amortization certificates were issued slowly. Inadequate mobilization planning did not make skilled manpower available quickly enough or in sufficient quantity. Until the institution of the controlled-materials plan they had to race with civilian users for available materials; even after that a CMP ticket was only a "hunting license." When materials became available in sufficient quantities, the lack of general and special-purpose machine tools rendered them partially useless, so that allocations outran their usability. The Defense Establishment furnished neither equipment nor components as promised. Relative urgency lists were not created until early in 1952, some 18 months after Korea.

Ultimately, their will was further crippled by the "blow hot, blow cold" production schedules as finally exemplified by the stretch-out. In response to inquiries directed by the committee, the following sample comments and criticisms were received from the industry:

> Machine-tool builders were swamped with orders from nondefense industries, who were able to move quickly and at once immediately after Korea; whereas, we had to prepare and submit a facility program and then have it approved by the Government.

> Increased demand for civilian and defense products, both competing for available productive capacity, resulted in increased procurement time for raw materials and machine tools. A continuation of these difficulties made it necessary

to revise downward our target shipping schedules on March 10, 1951, and September 25, 1951.

The procurement times for raw materials and machine tools increased substantially after Korea.

At the time war broke in Korea, for example, Boeing could place an order for standard aluminum extrusions and expect to have the order filled in 10 weeks. Today, January 1952, the normal procurement time for the same items is 38 weeks. This is typical of the increase in lead time for most quantity orders required by Boeing production. Individual orders can sometimes be filled faster, but only through extra effort on the part of the supplier. By now, so many demands have been made on the supplier that he has little capacity left for extra effort.

Considerable difficulty has been experienced in obtaining enough component parts to meet the schedules.

Allison has had difficulty meeting its spare parts program due to the lack of facilities that has also delayed the production program.

* * * One step which could be taken, which would not only materially improve delivery performance but which would also serve to reduce costs, would be to provide the contractor with sufficiently high priorities to obtain the necessary materials, Government-furnished aeronautical equipment, machine tools, and other facilities commensurate with the delivery schedules requested of it. An adequate priority rating would reduce the expense of additional personnel required for follow-up and expediting of machine tool and other procurement. It would eliminate many costly delays occurring in the factory due to shortages which necessitate out-of-sequence operation and use of less efficient machines. It would avoid schedule revisions which are not only costly themselves but which put the program further behind the desired delivery objectives of the National Defense Establishment.

One of the basic difficulties is that there is an expert (in the military procurement organization) in every field of jet engine design. The fuel expert is interested in seeing that all of his ideas are placed into effect. Other experts are also interested in seeing that their ideas are accepted and made a requirement in the production of engines. It is Allison's opinion that some kind of freeze should be undertaken. The exact period of time is open to debate but it appears that it would be advisable to freeze engine production for approximately 6 months to a year and then to place all the improvements on the engine at one time.

The military services have not advised Allison which one of its projects is the more important. Consequently, there is no priority list as far as Allison's production is concerned. Allison believes that it would be advisable for the armed services to determine which project is the most important in the manufacturer's plant. Furthermore, it is Allison's opinion that Air Force items should receive higher priority than other military items which probably would not be used as soon in the event of an emergency.

1. The armed services should determine what they want with definiteness.
2. Definitive contracts should be entered into with expedition. These contracts should be such that they can be utilized without so much red tape and delay.
3. Top priority should be given to what the armed services determines are the most urgent items in the event of an all-out war.

There is general agreement, with few dissents, that the stretch-out decreased production and increased cost. Convair alone estimated that the cost of each B–36 will increase about $160,000.

It should be recognized that dollars alone will not produce the modern aircraft to compose the bomber, fighter, and intercepter groups and the carrier and attack elements necessary. The deterrents to expeditious production must be met and recognized and must be overcome through coordinated effort and planning.

VII. The Failures of Planning and Coordination

No purpose is served by exposing the errors of the past except as they may be corrected in the future. The blundering and lack of cohesion in the defense effort from Korea to January 1952 were overwhelming. It is inconceivable that the mistakes made in 1941 and 1942 following Pearl Harbor could have been repeated with such unerring consistency in 1950 and 1951. We set out these extreme miscalculations with the earnest hope that they will not be further repeated. They cannot be; they are too costly in the production program; too expensive in budget and tax dollars.

Everybody has a different story. No one of them gibes with the other. Each bureaucratic finger points "to him." The defense effort is a history of stones being thrown from glass houses.

On December 19, 1950, the Office of Defense Mobilization was established by Executive order. Its Director had a broad directive from the White House to act as Assistant President in charge of defense production. The mandate was unlimited. The Executive order vested the Director of ODM with the power to—

> * * * direct, control, and coordinate all mobilization activities of the executive branch of the Government including but not limited to production, procurement, manpower, stabilization, and transport activities.

The National Security Act of 1947 established a Munitions Board. This was to be the designate of the Secretary of Defense in all matters of military matériel procurement. Section 213 of Public Law 253 prescribes the broadest of procurement delegations to the Chairman of the Munitions Board.

Despite these reservoirs of power and organization designed for effective coordination and cooperation, the committee has found little effective organization, less cooperation and a pitifully insignificant amount of coordination.

Not a single aircraft schedule was checked in detail for feasibility with the Defense Production Administration until July 26, 1951—13 months after Korea.

The Munitions Board suggests that although at that time it had developed certain proposals to reduce potential wartime shortages, it did not have the "authority to actually implement most of the corrective measures."

The Munitions Board admits to certain disabling deterrents to defense production. These are:

> * * * lack of a stable, long-range procurement program, particularly for long lead-time for components as a result of unpredictable procurement policies by industry of components; production design changes; failure of manufacturers to place realistic and timely orders with suppliers; natural reluctance on the part of industry to accept and produce on military contracts when such production would displace or delay production to fill regular customer orders; too many administrative and legal procedures; and, shortage of engineering and other technical skills for design and production of complex equipment required by the modernized Armed Forces.

Most of these deterrents are or should be within the jurisdiction of the Chairman of the Munitions Board, Secretary of Defense, or other existing agencies.

Among the criticisms received from responsible officials in and out of government as to the reasons for the lag in the defense effort are the following:

The Department of Defense lacks the know-how of procurement and production. It is composed of too many bankers and lawyers, and not enough production men.

Many millions of dollars were wasted in giving contracts to firms incapable of producing the items desired. More millions were wasted in remodeling and retooling plants for production of items in much greater number than would ever be needed.

Military schedules, prior to 1952, were completely unrealistic. Their fulfillment depended on the completion of certain inventions which were still in the embryo stage. When the inventions did not materialize, production was held up.

There is no one within the Department of Defense who has the authority to make a definite decision to designate items which are urgently needed and to order full speed production of these items without further development.

More planes can be produced if we are willing to settle for those models now in production.

Coordination within the Department of Defense is poor. Each of the services has an Under Secretary responsible for procurement. Theoretically, they are supposed to coordinate with the Chairman of the Munitions Board, but each is jealous of his own prerogative and does little to promote coordination.

Coordination between the Department of Defense and ODM was extremely poor. Defense only came to ODM when they were in trouble. The only way ODM could find out what was happening was to do its own investigating.

The Director of the Defense Production Administration told our staff that there was no review by his agency of the feasibility of schedules until late in 1951; that there have not been and, as of the time of the interview in April 1952, still were not developed plans by the military for the substitution of critical alloying metals in the event of an all-out mobilization which would require more of such materials than the free world possesses; that there was an insufficiency of all types of machine tools intensified by the refusal of the Defense Establishment to establish relative priorities or to unqualifiedly make pool reserves available; and that delays in production have resulted and still continue to result from a tardiness in the development of necessary advanced designing.

The only conclusion to be drawn from this pattern of criticism is the unfortunate one that there has been a complete failure of cooperative effort. Every segment of the defense agencies seem to have spent more time in criticizing and cavilling than in working together. No one echelon of this high command of defense production ever assumed or ever appeared to have assumed the necessary initiative until a very late date to break bottlenecks, to establish urgent priorities or to cut through the nonsense of inter-agency rivalries in order to get things done. The committee feels that there was sufficient power to have handled the situation and that a more vigorous job of leadership and direction could have been accomplished. The power was there. We suggest that it was never properly, vigorously, or courageously exercised.

VIII. The Balance Between Quality and Quantity Aircraft Production

Regardless of the dissipation of past deterrents to production, there still remains a terrible obstacle to speedy aircraft accomplishment. This obstacle has been described in an oversimplified form as "the need for design freezes." It is a more complicated problem than that.

It runs the gamut from failure to program away from short supply alloying metals through the emphasis on strategic bombing to the vaccum in control of quality design.

Illustrative of the very basic weakness is this colloquy between the chairman of the committee and General Bradley:

Senator JOHNSON. You have told us, and I was aware of it when we were in conference on the Unification Act of the responsibilities we gave the Joint Chiefs of Staff and others, but the one question I want answered * * * is if we are going to stop this tinkering and we are going to go full steam ahead with our production in 1954 to get the minimum required, who is the person that is going to say "stop this tinkering" under our present set-up?

General BRADLEY. There ought, in my opinion, to be some expediter at the top who would see that those things do not happen.

Senator JOHNSON. Is there such a person there now?

General BRADLEY. Well, in my opinion we ought to have somebody in authority in the Department of Defense that could do that. That gets back to my point that you ought to have some central military body who can make these decisions.

This failure of control can be devastating. There has been much discussion of the need for infinite design and variety and that obsolescent aircraft are valueless against a possible enemy. Military obsolescence, however, is a relative term. It depends on the arms and materials of a possible enemy. General Bradley agreed that United States resources and production capacity were superior to the Soviet, and that Soviet diversion of civilian production to military production is always with the purpose of aggression.

When the Russians stop making tractors and start making tanks they can ill afford to permit such end items to become obsolete. General Bradley felt that "we can't afford to put off any longer freezing models." He felt that if we did and failed to produce what was now on the drawing board that we would not have the major pieces of necessary aircraft equipment by the 1954 or 1955 target dates.

The importance of immediate quantity production is high-lighted by General Bradley's responses to a series of important and searching questions.

Senator JOHNSON. Isn't it true that Russia with her experience with us in NATO and Korea is not likely to follow the Nazi mistake in assuming we will not intervene should she continue her aggressiveness?

General BRADLEY. I am sure no one is going to make that mistake again. Germany did it twice, and certainly no country is going to make that again, particularly in view of the fact that the world has grown smaller since then. The means of intervening are so much quicker than they were in those days.

Senator JOHNSON. If in fact, as Deputy Secretary of Defense Foster stated to us, and I quote him, "The Kremlin intends world domination," isn't it a good bet that United States industrial capacity will probably be their primary objective?

General BRADLEY. We think so; yes, sir. The industrial capacity of the United States will be the first target of any A-bomb offensive of their part.

Senator JOHNSON. Would our Air Force be in a position to assure that "our enormous productive capacity" will be largely intact after the first period of bombing is over?

General BRADLEY. I would think, with our present state of defense, that if they launched a surprise all-out A-bomb attack our industry would be set back tremendously in its capacity to support a war.

Senator JOHNSON. And it might not be what we now refer to as our enormous productive capacity?

General BRADLEY. That is right.

Senator JOHNSON. And our Air Force is not presently in a position to assure that that enormous productive capacity will continue?

General BRADLEY. That is right.

Senator JOHNSON. Now, do not recent estimates—I am speaking of General Vandenberg's statements—that 70 percent of an enemy bombing force would penetrate our defenses successfully suggest the vulnerability of the "enormous productive capacity"?

General BRADLEY. I should think so; yes, sir.

Senator JOHNSON. Has due weight been given to the deterrent effect of a powerful force in being as against that of a powerful but highly concentrated industrial capacity representing in many respects an ideal bombing target, once Russia has the planes and the bombs?

General BRADLEY. We don't think it is until we attain something near the forces that we think are necessary to meet that aggression.

Senator JOHNSON. So that the deterring effect is not so much our enormous productive capacity as the A-bomb right at this time and our ability to deliver it. When Russia increases the number of its bombs and its ability to deliver such bombs and more or less balances its air power and its bombs with its ground potential, we are going to reach the danger point. Isn't that correct?

We need a reassessment of our research and development techniques. There is more to the problem than just producing in quantity the quality which has now been developed to the production point. There are certain elementary shortcomings in the research and development areas which need intensive study and undoubtedly procedural and substantiative remedial action.

Certain of these problems were quite frankly suggested in an address delivered in February of 1952 by the Director of the Research Division of the Navy Bureau of Aeronautics. The committee feels that he suggested guideposts for future activity in research and development.

Of course, the advent of newer and stronger materials may have a tendency to slow down or to reverse this tendency for the structural weight percentages to increase all out of bonuds. If this tendency continues, we will really have the truly safe airplane; it will not fly.

I believe that we should have anticipated and obtained distinct improvements in our power plants in the way of reduction in both fuel consumption and weight as our engine manufacturers have learned better how to design, maunfacture, and build.

We must take stock of this situation, determine exactly how much performance will be needed to insure this combat superiority and not base the demands upon wild desires.

By far, the greatest importance, however, is the reduction in the complexity of the installation and the amount of military load carried.

Are all the gimmicks that we are putting in our aircraft absolutely necessary to insure combat effectiveness and, therefore, combat superiority over an enemy or are we improving ourselves completely out of the picture? I may be pessimistic, but unless this tendency is checked and everyone understands the facts of life this increased complexity and ever-rising costs will not result in an increased combat effectiveness over-all, but may end in both financial and military catastrophe?

I feel that a concerted effort by all the airplane designers in the United States should be brought to bear upon this problem, and everyone in the services should be made aware as to the cost both in over-all weight and in dollars that must be charged to every new gimmick and every new demand for more and more performance. After all, the economy of this country will only stand about so much expenditure for armament and for preparedness. For that we should get the maximum possible number of good fighting aircraft.

In the last war we smothered the enemy both in Asia and in Europe with the power of our industrial production. Can we do that again with our heavy complicated aircraft, that probably cannot be maintained? Maybe we can, but the country will never recover from the effort.

Dr. James B. Conant of Harvard has had for some time serious concern about these same areas. He has stressed the essential differences between commercial manufacture where there has been developed over the years an effective partnership between research and develop-

ment on the one hand and the need for profitable production on the other. Dr. Conant feels that over the years the military have raced from the extreme of conservatism to that of wild desire. Dr. Conant urges the development of some type of negative opposition in the Military Establishment, whether explored in quasi-judicial proceeding or otherwise, to review the proposed gimmickeries of aircraft development.

> It is often said you don't need anything like this in science; in science the facts speak for themselves. That is, to my mind, a vast oversimplification of a complicated matter. Science in dealing with very restricted areas is an accurate, a fairly accurate method of prediction; but involving what can be done in research and development, it falls within the area of the most fallible human judgment. Technical decisions represent always the weighing of all probabilities and the discontinuing of prejudices. This quasi-judicial procedure of mine with a forced opposition is designed to bring out these prejudices and to neutralize them insofar as you can in a rational manner. Too often now the way the problems are resolved, as I see it, is to get the opposing groups together (and often they are opposed for more personal, shall we say almost political, reasons than technical), and get a committee and then split the difference. You get compromise decisions, decisions that nobody can tell exactly what they mean. And so this quasi-judicial procedure which I recommend to you if introduced in research and development would have the advantage of providing, I think, better decisions. Decisions that are not compromise decisions and decisions that would stick.

This is an area which needs further study. It is included in this report since it appears perfectly clear that the present dispersion of control or the lack of any control has held up quantity production.

IX. The Weakness of the Equal Force Concept

The fiscal year 1953 budget represents the first wedge into the distortion of the concept of the balanced force. To this date our Defense Establishment has always planned its budgeting for a coequality of naval, military, and air power. We believe that has been a mistake.

In a recent appearance on television the Secretary of the Air Force suggested that it is now an established principle "to get away from the balanced forces, to figure out what we need, and then to give that to the service that can do that job." At the same time Mr. Finletter suggested that the principle is not being followed. This is illustrated by the fact that in the cut from $55 to $52 billion budget, almost equal amounts were pared from the three service budgets. Obviously, the concept has not been discarded completely.

We do not propose here to suggest arbitrarily an imbalance of forces. We do suggest the necessity for an immediate air build-up to stated minimum requirements. Air power alone does not win wars. Nor does the existence of an enormous air fleet and reserve alone prevent wars. World War II could not have been won without the magnificent accomplishments of our land forces or without the superiority of our trained naval power. But, in a sense, we have committed ourselves to a strategic pivot—the atom bomb.

Although its use will not be tied solely to air power, it can best be carried and used in the early stages of any conflict in that way.

If the transport of the atomic bomb is the essential fulcrum of our offensive power, its delivery is the vital center of our early military strategy. The complementation of land and sea forces is secondary and must be so budgeted in terms of time particularly. If the enemy

proposes the same method of aggression, our defensive effort must rely, of necessity, on our internal air security. That this suggests a preponderant effort directed initially to increased air power is obvious.

This is an area which needs the most intense attention and study. Unification by statute is no substitute for a necessary singleness of purpose dictated by the realities of military need. A balance of forces is not an equality of forces. In fact, we still need to perfect a real balance based upon the facts of modern war.

X. Conclusions

These then, are the facts of our current air power position:

1. The Joint Chiefs of Staff have stated that the years 1953 and 1954 will constitute the period of our greatest peril. This estimate is based upon intelligence of the world situation.

2. To meet that peril, they have devised plans which call for the creation of a 143-wing Air Force, and certain naval aviation force levels to be in existence not later than December 31, 1954, and by June 30, 1954, if at all possible. These forces are considered the minimum for national security.

3. Despite the conclusions of the Joint Chiefs of Staff, it has been decided for fiscal considerations to postpone the target date for securing the minimum essentials of air preparedness by at least a year. This decision—termed the "stretch-out"—was not made for military reasons.

4. The stretch-out—whatever the reasons for its imposition—will give us less security than we need; at a later date than we need it. It will increase the unit cost of aricraft by 2½ to 3 percent, just as buying an article on the installment plan increases the cost of that article. It may well cost more in the future than the $3 billion it is saving in fiscal 1953.

5. The stretch-out will affect seriously and unfavorably the amount of military aid that can be given to Western Europe.

6. The stretch-out has aggravated the distress of the aircraft industry arising from the "off again, on again, gone again" scheduling of the Defense Department.

7. Despite the handicaps, the aircraft industry can increase its production considerably provided only that it receives the tools, materials, and manpower that are necessary.

8. Aircraft production has been hampered by the lack of a "topside" authority with power to put an end to the endless research and development and order concentration on volume production of that which has been developed already.

9. Military authorities have hampered production because of their fears that a "freeze" in designs will leave them with obsolescent planes on their hands. They have belabored this point unreasonably, particularly in the face of accelerated production by a prospective enemy.

10. A tendency toward "gimmickerie" has loaded some of our planes with gadgets to a point where their effectiveness has been decreased.

11. The concept of the "balanced force" has been translated in budget terms into the principle of balance slices of the appropriations

pie. This means that each service receives an approximately equal share of dollars regardless of military needs.

12. The principal conclusions of the committee's interim report of defense mobilization—the thirty-fifth report—have been borne out by events. The failure to meet initial production schedules, noted in that report, is now being used as an excuse for the stretch-out.

XI. Recommendations

1. While the damage to our national safety cannot be completely undone, every effort should be made to reach the minimum air power recommended by the Joint Chiefs of Staff as soon as possible.

2. The Department of Defense must act in coordination with the Office of Defense Mobilization to study, analyze, and reassess the mobilization philosophy and the fiscal and economic requirements necessary to meet required production peaks and, at the same time, develop war production lines available for a total emergency. The emphasis, though, must be on attainment of a minimum strength sufficient to hold off a prospective enemy and attacker while stand-by facilities are being put into use. A proper allocation must be made of these fiscal, production and economic responsibilities to Government officials with the needed skills to exercise such tasks.

3. The National Security Act of 1947, even as amended in 1949, must be further strengthened to vest specific responsibilities for control of military production and for procurement of military matériel. It is a dangerous thing for "tinkering" to continue unceasingly. The Defense Department should submit proposed legislation to the next session of Congress to effectuate this recommendation.

4. Pending action on this proposed legislation, the Secretary of Defense, or the President, should appoint a full-time production czar with power to determine priorities, to freeze designs to the necessary extent, and order quantity production initiated, so that our minimum air requirements are met as quickly as possible.

5. The Secretary of Defense should appoint a committee to reassess the Nation's air strategy; reexamine research and development procedures and reevaluate design procedures. The committee should have among its members at least two prominent scientists and the Chairman of the National Advisory Committee for Aeronautics.

6. In addition, the Secretary of Defense should appoint a committee including nonmilitary persons to evaluate the necessary balance of our forces against the strategy necessary to be employed in this period of atomic warfare.

7. The Secretary of Defense should issue specific directives to implement the recommendations made by the Special Assistant to the Secretary along the following lines:

(*a*) That contractor incentives be increased.

(*b*) That sources of procurement be broadened to eliminate apex buying.

(*c*) That there be a simplification of procurement procedures.

(*d*) That there be a minimization of design changes.

(*e*) That contracts be placed more quickly.

(*f*) That there be a simplification of procurement regulations regarding contract changes.

8. The Secretary of Defense should report to Congress—through this committee—no later than December 1, 1952, his proposed program for plant expansion along with the details of the progress accomplished and firm dates for future development.

9. The Chairman of the Munitions Board should present to Congress immediately, the proposed monthly schedules of aircraft production, by types, and should continue to present such schedules along with aircraft acceptances on a monthly basis until the 143-wing Air Force and the authorized naval aviation programs are completed;

10. The Aircraft Advisory Committee to the Munitions Board should present to Congress recommendations to maintain the aircraft industry in a healthy state in periods of peace as well as in periods of defense mobilization.

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